

Atchison County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

5/24/2016

Using the most recent IMPLAN data available (2014) adjusted for 2016, 23 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Atchison County economy.¹

These 23 sectors have a total direct output of approximately **\$598.7 million** and support **1,182.6 jobs** in Atchison County. Running the model for all 23 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Atchison County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	1,182.6	12.09%	\$135,983,602.09	20.68%	\$598,686,853.61	91.05%
Indirect Effect	438.6	4.49%	\$38,325,284.00	5.83%	\$70,044,513.81	10.65%
Induced Effect	349.5	3.57%	\$20,918,374.70	3.18%	\$39,674,821.64	6.03%
Total Effect	1,970.8	20.15%	\$195,227,260.79	29.69%	\$708,406,189.06	107.74%

As shown in the above table, agriculture, food, and food processing sectors support **1,970.8 jobs**, or **20.15%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$708.4 million**, roughly **107.74% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 23 agriculture, food, and food processing sectors is approximately **\$195.2 million**, or **29.69% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **29.69% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **484.5 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Atchison County.

Top Ten Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	484.5	\$40,258,251.10
Flour milling	195.1	\$322,473,442.71
Other snack food manufacturing	121.9	\$87,752,493.64
Landscape and horticultural services	90.4	\$2,727,920.71
Wholesale trade	86.4	\$16,694,164.16
Grain farming	64.0	\$18,421,606.70
Bottled and canned soft drinks & water	55.5	\$42,407,098.51
All other crop farming	46.4	\$2,810,419.90
Limited-service restaurants	41.5	\$2,915,036.47
Real estate	36.5	\$4,065,983.38

The flour milling sector directly contributes approximately **\$322.5 million** to the Atchison County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Sectors by Output		
Sector	Total Employment	Total Output
Flour milling	195.1	\$322,473,442.71
Other snack food manufacturing	121.9	\$87,752,493.64
Bottled and canned soft drinks & water	55.5	\$42,407,098.51
Other animal food manufacturing	27.9	\$41,530,780.66
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	484.5	\$40,258,251.10
Oilseed farming	25.7	\$22,660,797.91
Grain farming	64.0	\$18,421,606.70
Rail transportation	35.2	\$17,911,277.11
Wholesale trade	86.4	\$16,694,164.16
Roasted nuts and peanut butter manufacturing	16.5	\$8,824,345.47

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Atchison County economy.

All Agriculture, Food, and Food Processing Sectors		
Sectors	Total Employment	Total Output
Oilseed farming	26.1	\$22,660,797.12
Grain farming	64.9	\$18,421,606.06
Vegetable and melon farming	0.4	\$150,368.39
Fruit farming	0.2	\$36,116.18
Tree nut farming	0.0	\$104.19
Greenhouse, nursery, and floriculture production	0.1	\$27,367.35
All other crop farming	47.0	\$2,810,419.80
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	478.2	\$40,258,251.19
Dairy cattle and milk production	2.4	\$1,479,196.91
Poultry and egg production	1.6	\$1,753,268.48
Animal production, except cattle and poultry and eggs	10.3	\$982,021.27
Commercial logging	1.2	\$61,353.51
Other animal food manufacturing	28.4	\$41,530,780.79
Flour milling	200.5	\$322,473,449.71
Bread and bakery product, except frozen, manufacturing	7.7	\$809,098.66
Frozen cakes and other pastries manufacturing	0.4	\$61,078.37
Roasted nuts and peanut butter manufacturing	16.7	\$8,824,345.59
Other snack food manufacturing	123.4	\$87,752,494.81
Bottled and canned soft drinks & water	57.5	\$42,407,096.86
Sawmills	3.3	\$918,024.00
All other industrial machinery manufacturing	0.5	\$162,433.40
Veterinary services	28.2	\$2,379,265.55
Landscape and horticultural services	94.5	\$2,727,920.77

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Atchison County, the retail sector was omitted.